Red Line/Blue Line Connector Project
Working Group Meeting #5

LOCATION OF MEETING: Suffolk University, Amenities Center, Boston, MA

DATE/TIME OF MEETING: December 14, 2009, 4-6:00 pm

Working Group Members:
John Achatz, Beacon Hill Civic Association
Robert D'Amico, Boston Transportation Department
Jim Fitzgerald, Boston Redevelopment Authority
David Loutzenheiser, Massachusetts Area Planning Council (MAPC)
Rafael Mares, Conservation Law Foundation
John Messervy, Mass General Hospital
Thomas Nally, A Better City
Laura Sargent, Office of Representative Martha Walz, (alternate)
Leah Walczak, Historic New England

Staff:
Scott Hamwey, Massachusetts Department of Transportation (MassDOT)
Scott Peterson, Central Transportation Planning Staff (CTPS)
Mark Pelletier, STV
Mark Ennis, STV
Kristine Gorman, STV
Michael Sutton, VHB
Kristine Wickham, VHB
Regan Checchio, Regina Villa Associates (RVA)
Nancy Farrell, RVA

Agency/Public:
Anne Fanton
Brian Gregory

PURPOSE/SUBJECT: This was the fifth meeting of the project Working Group concerning the connection of the Red Line and Blue Line at the Charles/MGH and Bowdoin stops respectively. The meeting included a presentation on the ridership modeling results and a review of build Alternatives 1 and 2.

Introduction
Nancy Farrell, Regina Villa Associaties (RVA), opened the meeting and asked those present to introduce themselves. She introduced Scott Hamwey, Project Manager for the Massachusetts Department of Transportation (MassDOT), Office of Transportation Planning.

Mr. Hamwey explained that since the last Working Group meeting, a public meeting had been held on the Red Line/Blue Line Connector Project. Mr. Hamwey said MassDOT

was pleased with the turnout for the meeting and reiterated the Commonwealth's commitment to completing final design for the project.

Presentation of Ridership Modeling Results
Scott Peterson, CTPS, provided an update on the results of the ridership modeling analysis for the project. Mr. Peterson reviewed the 5-step ridership model that he had presented at a previous meeting and discussed the performance measures.

On the transit side, the performance measures include linked transit trips (which counts a trip as "1" from point of origin to destination, no matter how many connections are made); unlinked transit trips (which counts each vehicle boarding as a separate trip); transfer activity and peak loads. On the highway side, the model will measure the traffic volumes by time period on major roadways as well as the congested speeds on major roadways. The model also measures air quality (NOx, VOC, CO, and CO2).

First, Mr. Peterson reviewed the 2008 Existing Conditions (Average Weekday) for the system:

Total Linked Transit Trips	**945,800**
Total Unlinked Transit Trips	**1,295,800**
Commuter Rail Ridership	123,100
Rapid Transit Ridership	784,300
Blue Line	64,500
Red Line	242,900
Green Line	288,200
Orange Line	182,100
Silver Line (BRT)	25,700
MBTA/RTA Buses	358,300
Ferry Service	4,400

Mr. Peterson then compared the Existing Conditions (2008) for the Blue Line and Red Line:

	Blue Line	**Red Line**
FY Annual Unlinked	16,346,400	68,560,600
Average Daily Boardings	64,550	242,900
Highest Inbound Daily Boardings	Maverick	Harvard
Highest Outbound Daily Boardings	Government Center	Park Street
Station with highest # daily transfers	Government Center	Park Street
Station with highest # drive trips	Wonderland	Quincy Adams
Blue Line Origin to Blue Line Exit	65%	
Blue Line Origin to Red Line Exit	10%	
Blue Line Origin to Green Line Exit	17%	
Charles/MGH Daily Boardings		9,840
Red Line Origin to Red Line Exit		78%
Red Line Origin to Green Line Exit		15%
Red Line Origin to Orange Line Exit		6%

Mr. Peterson then examined the following scenarios:

- **2008 Baseline (Blue Line: Wonderland to Bowdoin)**
- **2030 No-Build (Blue Line: Wonderland to Bowdoin)**
- **2030 Alternative 1 -- Blue Line: Wonderland to Charles/MGH (no Bowdoin)**
- **2030 Alternative 2 – Blue Line: Wonderland to Charles/MGH (with Bowdoin)**

He explained that the assumptions he was using stemmed from the 2007 Adopted Land Use from MAPC regarding population and employment in the year 2030. John Messervy, Massachusetts General Hospital (MGH), questioned the stability on employment growth projected for the MGH geographic area. He said the facility is projecting patient growth at 2-5% annually. Mr. Peterson noted that he is using MAPC projections. Ms. Farrell suggested that this issue be pursued with MAPC. Mr. Hamwey pointed out that when all traffic analysis zones encompassing the campus were taken into account, that signficant growth was in fact projected for MGH.

The transportation assumptions were those projects included in the most recent Boston Metropolitan Planning Organization (MPO) Regional Transportation Plan (RTP). These transit projects include: Green Line Extension to Medford, Fairmont Commuter Rail Additional Stations, State Implementation Plan (SIP) Parking Expansions and Wonderland Parking Expansion. The assumptions exclude Urban Ring Phase 2, Silver Line Phase 3, and Blue Line Extension to Lynn.

	No-Build (2030) compared to Existing Conditions	**Alternative 1 (2030)**	**Alternative 2 (2030)**
Total Linked Transit Trips	1,085,600 (+9%)	1,086,200	1,086,100
Total Unlinked Transit Trips	1,501,400 (+12%)	1,497,100	1,497,200
Commuter Rail Ridership	154,800 (+23%)	154,700	154,700
Rapid Transit Ridership	868,200	864,400	864,500
Blue Line	73,000 (+13%)	77,200	77,400
Red Line	252,600 (+4%)	250,600	250,400
Green Line	337,200 (+17%)	331,100	331,300
Orange Line	198,500	198,600	198,500
Silver Line (BRT)	60,500	60,500	60,500
MBTA/RTA Buses	412,700	412,300	412,300
Ferry Service	5,200	5,200	5,200

Mr. Peterson noted that the increase in Vehicle Miles Travelled (VMT) from 2008 to the 2030 No-Build is 17%. Average travel time also increased by 6%.

Mr. Peterson concluded that there is no major difference between Alternatives 1 and 2 with respect to the number of unlinked or linked transit trips. A small number of transit trips are lost due to Bowdoin Station being eliminated, but more trips are gained overall by faster runtimes on the Blue Line to Charles/MGH Station. He added that in 2030, the number of projected jobs that are in walking range to Bowdoin Station are relatively small and are walkable from Government Center. The connection between the Blue

Line and Red Line reduces crowding on the Red Line between Park Street and Charles/MGH and on the Green Line between Park Street and Government Center. The Build Alternatives also reduce 500-600 auto trips between Cambridge and Revere. There would also be a small amount of traffic relief on Cambridge Street and some air quality benefits.
Mr. Messervy said that the number of transfers reduced between Park Street and Government Center does not appear very large.

Mr. Peterson also discussed the activity at Charles/MGH Station:

Estimates	**Station Boardings**		
	Total	Red	Blue
2008	9,840	9,840	--
2030 No Build	10,050	10,050	--
2030 Alternative 1	20,600	13,050	7,550
2030 Alternative 2	22,080	12,610	9,470

Ms. Farrell asked what effect an increase in the projected 2030 employment growth at MGH would have on the ridership projections. Mr. Peterson said it would help Alternative 1 (no Bowdoin) because more riders would prefer to reach Charles/MGH faster.

Preview of Draft Environmental Impact Report
Kristine Gorman, STV, then reviewed the next steps in the project timeline:

- Submit Alternatives Analysis – January 2010
- Submit Draft-Draft Environmental Impact Report (DEIR) & 10% Design Report – December 2009-February 2010
- Working Group Meeting – March 2010
- Submit DEIR – April 2010
- Public Hearing – May 2010
- Certificate Issues – June 2010

Ms. Gorman explained that in the DEIR, the project team will respond thoroughly to the Secretary's scope and all comments. The team will perform a thorough treatment of all issues and include detailed mitigation measures and commitments. The goal of this process is to allow the Secretary to issue a certificate stating that no further analysis or public review of the project is needed.

Ms. Gorman then reviewed potential roles of the Working Group in the DEIR process. She suggested that a subcommittee be created to review the document before final submission. Mr. Hamwey said that if any Working Group members are interested in participating in this review to email him.

John Achatz, Beacon Hill Civic Association, suggested that the draft DEIR be shared with all members of the Working Group. Mr. Hamwey said that the project team could do this if members were interested.

Alternatives 1 and 2:

Capital Improvements

Mark Ennis, STV, then reviewed the proposed capital improvements for Alternatives 1 and 2. First he reviewed the open cut structures for the two alternatives on a map:

Alternative 1	Alternative 2
Construction Staging Shaft	Construction Staging Shaft
Tunnel Boring Machine (TBM) Access Shaft	TBM Access Shaft
Charles/MGH Blue Line Egress	Charles/MGH Blue Line Egress
Vent Shaft #1 at Anderson Street	Vent Shaft #1 at Anderson Street
--	Vent Shaft #2 at Joy Street
Bowdoin Egress	Bowdoin Egress
TBM Receiver Shaft	TBM Receiver Shaft
Cut and Cover from Station 19+50 to Station 27+30	Cut and Cover from Station 19+50 to Station 27+30

He also noted that the location of the proposed vent shaft has changed since previous diagrams.

Mr. Messervy asked why the tunnel is so deep. Mr. Ennis noted that the TBM machine requires the tunnel be formed fairly deep. Ms. Gorman added that space between the surface and tunnel is also needed for substations and other power facilities.

Mr. Messervy asked if the team had performed any geotech work yet. Mr. Ennis said that Haley and Aldrich had reviewed existing boring information from previous studies, primarily the 1987 GZA Study, GEI borings from Charles MGH remodel, original Red Line and Blue Line borings and other historic and small projects in proximity and created a soil profile for Cambridge Street.

Mr. Loutzenheiser, MAPC, asked how the proposed Blue Line station depth compared to other stations. Mr. Ennis noted that this proposed station is about 40-50 feet deep and Aquarium Station is approximately 100 feet deep.

Mr. Messervy asked how riders will access the new Charles/MGH Blue Line station. Mr. Ennis said that they would access it directly from the existing Charles/MGH mezzanine level into the center island of the proposed underground station.

Mr. Ennis then reviewed the construction phasing for the two alternatives at the proposed Charles/MGH Blue Line track and platform. He also reviewed all the cut and cover areas that will be needed for tunnel (and egress) construction.

Mr. Messervy asked if train storage could be located at the eliminated Bowdoin Station instead of at Charles/MGH. Ms. Gorman noted that the MBTA prefers to keep the trains at Charles/MGH for morning start-up and to maintain the necessary 4-minute headways.

Construction Schedule

Mr. Ennis then reviewed the projected construction schedule, with an assumed Notice to Proceed of July 2012. The anticipated completion date would be September 2018, with a construction duration of 6 years and 3 months. During construction, there would be no

interruption of Red Line service. At-grade night work would be limited because of residential areas. Blue Line service would be interrupted during the installation of a Government Center crossover, which would close Bowdoin Station.

Mr. Ennis noted that utility relocations would need to occur prior to each open cut section. The projected mining operation is based on a 7-day work week of 3-8 hour shifts. The majority of the remaining work is based on a 5-day work week with 8-hour shifts and some night and weekend work. Michael Sutton, VHB, noted that the there would be three shifts—2 production shifts and 1 maintenance shift. Mr. Sutton also noted that the cut and cover work at Government Center would occur simultaneously to the TBM tunneling.

Bob D'Amico, Boston Transportation Department, confirmed that tunnel construction would be west to east for both tunnels.

Ms. Gorman pointed to the detailed schedule available in the presentation that showed the overlap of the many construction phases.

John Messervy asked if the team had any cost estimates available. Mr. Ennis noted that this detailed schedule and tasks will feed the final cost estimates. Mark Pelletier, STV, said the cost estimates will be part of the Alternatives Analysis Report.

Stations and Egress

Ms. Gorman then reviewed the stations and egress for the two alternatives, using track diagrams and plans. She noted that the Charles/MGH Blue Line egress would be a hatchway at the median (far enough east to accommodate the platform).

Mr. Achatz said there is already community opposition to the median area. Mr. Messervy asked if the team had looked at having the hatchways in the sidewalks. Ms. Gorman said that would require land takings. Mr. Ennis noted that if the hatches were placed in the sidewalk, bollards would be needed in addition to the hatch. Mr. Sutton added that the hatch would need to be placed just shy of North Anderson, which would not be wide enough due to curbside parking.

Ms. Gorman said that for Alternative 2 (with Bowdoin), an egress as well as a ventilation shaft would be required. Mr. Pelletier said that the team is assuming a headhouse would not be required for this hatch, but this is unconfirmed.

Mr. Achatz said that openings in the median is very controversial to the neighborhood. He added that the community already has concerns about the existing hatch at Joy street due to safety issues.

Ms. Gorman noted that Alternative 1 does not require a new egress hatch because it will use the existing Bowdoin Station.

Power, Communications and Signals

Mr. Ennis discussed the track power designs, based on MBTA standard specifications, site surveys, previous projects with the MBTA, and the results of a load flow study. He reviewed the location of proposed substations for Alternatives 1 and 2.

Mr. Messervy noted that based on the diagrams at Charles/MGH, the escalators appear to be in very awkward spots. He asked if it was possible to move the fare collection systems back to give more room. Mr. Ennis said that space if very tight. Ms. Gorman added that it was also necessary to keep the escalators and elevators aligned with the platform below.

Mr. Messervy asked if the paid-area of the lobby will be large enough to accommodate the new riders. Mr. Pelletier said the team will continue to look at these issues, but noted that the escalators are given preference to those taking the stairs.

Tom Nally, A Better City, noted that more people use the escalators than use the stairs. He said that in his opinion the tradeoff works.

Mr. Hamwey noted that half the Blue Line passengers will be transferring to the Red Line so it will be important that these movements are not awkward.

Mr. Ennis then reviewed the proposed communications systems, based on MBTA standard specifications, site surveys and previous MBTA projects.

Public Comment
Brian Gregory asked if the proposed construction dates are realistic. Mr. Hamwey noted that the Commonwealth has not committed funds to construct the project. There is only a legal commitment for the final design of the project.

Mr. Gregory asked why these issues were not addressed when Charles/MGH station was recently reconstructed. Mr. Hamwey said it had not been possible to coordinate at that time.

Ms. Farrell adjourned the meeting at 5:42 PM.

EOT Contract No.: STV_REDBLU
STV Contract No.: 40-14212
Meeting Minutes Prepared by: Regan Checchio, RVA